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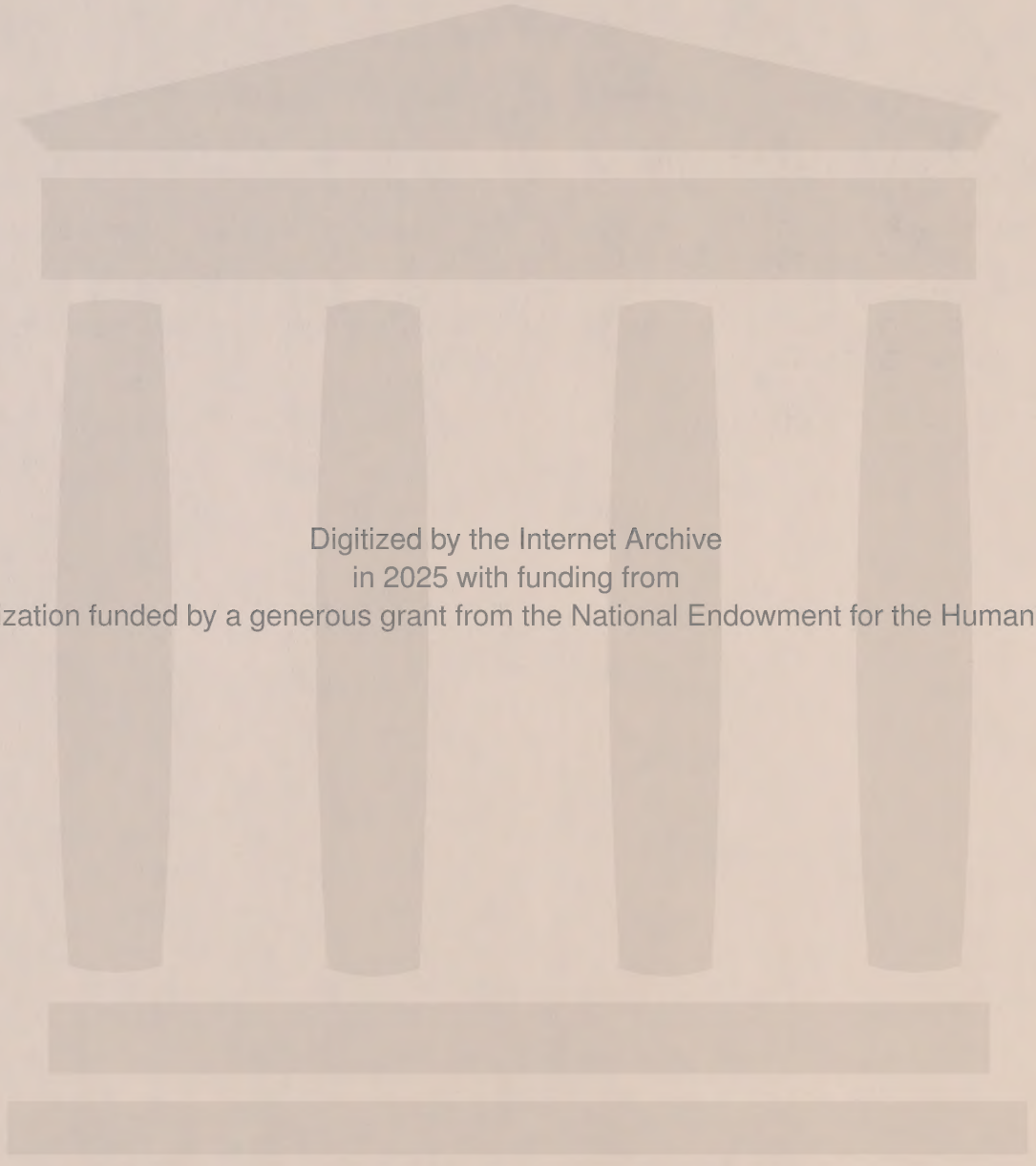

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Council of the District of Columbia
News Release

City Hall, 14th and E Streets, N.W. Fifth Floor 638-2223 or Government Code 137-3806

FOR IMMEDIATE RELEASE October 3, 1975

HOBSON WANTS COMPETITIVE BID FOR $9.6 MILLION CAPITAL OUTLAY

Councilman Julius W. Hobson (Statehood at-Large) announced today that he is introducing a resolution at the Council's October 7th Legislative Session to disapprove the expenditure of $9.6 million to build a resource recovery facility at Lorton, Virginia for FY 1976.

Under the Budget Act approved by the City Council last spring, at the initial request of Councilman Hobson, the Mayor and the Department of Environmental Services were directed to consult with the Federal Energy Administration and the Environmental Protection Agency on the most cost effective resource recovery facilities available. They were also directed to obtain assurances that the District was examining solid waste disposal as an entire system and report back to the Council within 90 days for legislative action.

"Based on the report submitted to the Council by the Department of Environmental Services on September 15, I do not feel that other resource recovery systems were adequately explored," Hobson explained. "The report failed to explain why experienced firms such as Raytheon, Monsanto, Wheelabrator-Frye, and Union Carbide were not invited to present proposals for the feasibility study of the potential for actual recovery of resources."

The D.C. Auditor has confirmed today that there was no competition for the NCRR work which formed the basis for the $9.6 million budget request. Furthermore, Mr. Watson suggests that there is still "a question as to whether NCRR could continue to comply with its covenant (conflict of interest) due to its relationship with the beverage industry which may have an interest in recovery of beverage container materials." Therefore the City Council has no alternative but to return immediately to the drawing board on this issue.

Other factors which contributed to Hobson's opposition were outlined in a memorandum to Council members dated October 3rd.

"I support the urgent need for effective resource recovery but in the context of finding the most cost effective ways to solve the District's growing solid waste problems and at the same time assuring maximum energy recovery,"Hobson declared. In lieu of approving $9.6 million Hobson is asking the City Council to direct the Mayor to 1) competitively select an energy resource recovery consultant as a technical advisor to find a market for the energy that could be derived from the city's refuse and 2) design and construct through a competitive bid process a resource recovery facility tailored to the needs of that energy market.

"Resource recovery affects the quality of life for everyone living in or visiting the District of Columbia. It is necessary for us to know the issues and protect ourselves from hasty and expensive mistakes."

For More Information Contact:

Mr. Sandy Brown
638-2223 Ext. 40

Council of the District of Columbia
Report

City Hall, 14th and E Streets, N.W. Fifth Floor 638-2223 or Government Code 137-3806

To All City Councilmembers

From Julius W. Hobson, Councilmember at-large

Date October 3, 1975

Subject Resource Recovery

The whole subject of solid waste management and resource recovery is complex, but it is one we need to learn to understand -- an issue in which all citizens have a financial as well as an environmental stake. Currently the District's solid waste management system is dependent upon a rapidly diminishing landfill at Lorton, Virginia, and an old incinerator scheduled to be phased out in early 1977. Due to inflation, the energy crisis, and shortages in available land for landfill operations, the cost of getting rid of our trash has soared to about twice the national average. It now costs D.C. residents $50 to $65 per ton to collect and dispose of their garbage. In Chicago it only costs between $30 and $40 per ton to collect and dispose of their trash. The D.C. taxpayer suffers from an increasing lack of services at higher costs. It is a quality of life issue which few community leaders have recognized.

To cope with this growing burden it has become necessary for the District to recapitalize its solid waste system. To this end Mayor Washington requested in his FY 1976 capital budget $9.6 million to construct a 650 ton per day resource recovery facility at the I-95 landfill in Lorton. The proposed facility includes equipment to recover glass, aluminum, and ferrous metals from the waste stream and to shred the remaining waste for possible use as an energy source. The 650 ton system will be used to process this small part of the garbage of D.C., Fairfax Co., Arlington Co., and Alexandria with the District assuming responsibility for operation and costs. Under the present proposal over 90 percent of the total 4,000 tons of trash hauled to Lorton each day will still continue to be landfilled.

This project, an outgrowth of an agreement which established the I-95 landfill at Lorton was developed by the National Center for Resource Recovery (NCRR) prior to the elected City Council. NCRR is a non profit organization dominated by industry groups opposed to returnable beverage container legislation such as American Can Company, ALCOA, Anheuser-Busch, Pepsi-Co., U.S. Steel, and Anchor Hocking Glass. Their proposal for D.C. provides for recovery and reuse of materials which comprise only 20 percent of the solid waste stream. It does not provide a capability for utilizing the remaining 80 percent as an energy source.

I foresee the possibility of the District building a resource recovery plant, at great expense, designed to recover materials and to produce shredded waste as an energy source only to have that shredded waste portion (which makes up 80 percent of the waste stream) dumped into the landfill because there is no firm market guarantee.

In addition, I have other misgivings about the proposed NCRR resource recovery project:

- The impact of inflation plus imprecise cost estimates could mean considerable cost increases over the original $9.6 million. The Environmental Protection Agency estimated the cost could go as high as $14 million.

- The technology for recovering materials has not been demonstrated on a scale as large as that presented in the project's justification. EPA examined the risk involved and commented, "investment in a system to recover glass and aluminum and other non-ferrous metals would involve considerable risk at this time." They further commented, "because materials recovery technology has not been demonstrated on a commercial scale, the revenue stream from materials recovery is not nearly so certain as the NCRR study implies."

- The market commitments for the various materials that are to be recovered are based only on letters of intent. To date there is no commitment nor is there a system designed for using the shredded waste that the facility produces. Therefore I can only conclude that the shredded waste will be dumped into the landfill.

- Essentially this is a demonstration project. The results from recent Federally assisted projects should be thoroughly evaluated before the District, with its limited resources, embarks on a pioneering effort of this type.

- D.C. foots the initial bill by means of a bond issue. Fiscal policy dictates proceeding with caution in order to minimize the risk inherent in such an undertaking.

I would conclude by offering my support to the concept of resource recovery but in the context of finding the most cost effective ways to solve the District's growing solid waste problem and at the same time assuring maximum energy recovery. Specifically I would suggest to the Mayor that he consider the recommendations of the Environmental Projection Agency and the Federal Energy Administration.

Their policies recommend finding buyers for energy and the designing of a resource recovery system tailored to the energy needs of that buyer. The Federal government in Washington, D.C. offers a unique opportunity as a potential market for energy recovered from the District's waste stream. By focusing on energy aspects first, the Mayor will not only help solve the energy crisis, but will also increase the life of the Lorton landfill by implementing a system that recovers and utilizes the largest portion of the waste stream.

In lieu of approving $9.6 million the City Council should now:

1. Require the city to competitively select an experienced energy resource recovery consultant as a technical advisor to the city to find a market for the energy that could be derived from the District's garbage.

2. Require the city to design and construct through a competitive bid a resource recovery facility that will be tailored to the needs of the energy market.

Resource recovery can and will affect the quality of life of everyone living in or visiting the District. It is time for us to begin to learn the issues to protect ourselves from hasty and expensive mistakes.

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DISTRICT OF COLUMBIA COUNCIL

A Resolution

In the Council of the District of Columbia

Councilmember Julius W. Hobson introduced the following resolution which was referred to the Committee on_____

To disapprove the expenditure of $9.6 million called for in the fiscal year 1976 Budget Act (Bill 1-46) for the Resource Recovery Facility at the I-95 landfill located at Lorton, Virginia.

Resolved by the Council of the District of Columbia that this resolution may be cited as the "Resource Recovery Expenditure Disapproval Resolution of 1975."

Sec. 2. Pursuant to the Council's report on the fiscal year 1976 budget that accompanied the Fiscal Year 1976 Budget Act passed on April 29, 1975 which approved $9.6 million contingent upon a 90 day report by the Mayor and the Director of Environmental Services on their consultations with the Federal Energy Administration and the United States Environmental Protection Agency on resource recovery systems, the Council hereby disapproves the expenditure of $9.6 million for the construction of the resource recovery facility at the I-95 landfill located at Lorton, Virginia for fiscal year 1976.

Sec. 3. The Council directs the Mayor to --

(a) competitively select an experienced energy resource recovery consultant to find a market with suitable guarantees for the energy that can be derived from the District's solid waste stream;

(b) design and construct through a competitive bid process a resource recovery facility tailored to meet the needs of the energy market identified in (a); and

(c) report to the Council the result of his actions pursuant to (a) and (b) within three months after the date of enactment.

COUNCIL OF THE DISTRICT OF COLUMBIA

WASHINGTON, D. C. 20004

June 27, 1975

Mr. Matthew Watson, Auditor
Office of the District of Columbia Auditor
Room 936 - The Munsey Building
1329 E Street, Northwest
Washington, D.C. 20004

Dear Mr. Watson:

Thank you for your response of June 12, 1975. However, there are several questions concerning the contractural arrangements among the District of Columbia, the Council of Governments, and the National Center for Resource Recovery, Inc. (NCRR) that remain unclear.

Specifically with regard to the District's role in the contractural proceedings with the National Center for Resource Recovery:

- When was the initial request for proposal on recycling urban waste issued? Where did it originate? Who drafted the request?

- According to an article in the Washington Star News (see the enclosure), 52 companies received a request for proposal. How many of them responded? What specific companies submitted proposals? What person or organization within the District Government or outside it, reviewed these responses?

- What process was involved in authorizing the District to approve the contract made by the Waste Management Agency of the Council of Governments with the National Center for Resource Recovery for the feasibility studies? Was there money budgeted for the District to participate in undertaking this project through C.O.G.?

- Has the District of Columbia entered into any separate contracts with the National Center for Resource Recovery? If so, what was the nature and purpose of that contract? When was it consumated? If made prior to January 1, 1975, did the contract comply with the Federal Procurement regulations? Was the contract given requisit public notice?

With respect to the Council of Government's role:

- Did C.O.G. put out a competitive bid for the resource recovery feasibility study that was submitted to the City Council as the basic support document to justify funding the proposed resource recovery facility at Lorton, Virginia?

- In the field of resource recovery there are a number of organizations who are equally competent. Did C.O.G. go for a sole source contract with the National Center for Resource Recovery rather than procuring a contract on a competitive basis? Who was the chairman of the Waste Management Agency at the time the contract with the National Center for Resource Recovery was concluded? Is it ethical for a responsible D.C. official to approve a contract which was made on a sole source basis?

- In addition to the C.O.G. contract have any other contracts been made with the National Center for Resource Recovery?

The Council is working under a 90 day extension period before any work on the project can begin, and we therefore request a response as soon as possible. If we can help in any way please contact my office. I will be happy to cooperate in any way.

Sincerely,

Julius W. Hobson
Councilmember at large

Enclosure
cc: Rev. Jerry A. Moore, Jr., Chairperson,
Committee on Transportation and Environmental Affairs
William McKinney, Director,
Department of Environmental Services

COUNCIL OF THE DISTRICT OF COLUMBIA
OFFICE OF THE DISTRICT OF COLUMBIA AUDITOR
1329 E STREET, N.W.
WASHINGTON, D. C. 20004

MATTHEW S. WATSON
DISTRICT OF COLUMBIA AUDITOR

October 3, 1975

The Honorable Julius W. Hobson
Councilmember-at-Large
Council of the District of Columbia
District Building
14th & E Streets, N. W.
Washington, D. C. 20004

Dear Mr. Hobson:

This letter is in response to the questions raised in your letter of June 27, 1975 concerning contractural agreements with the National Center for Resource Recovery, Inc. In particular, you requested information concerning the agreement for the feasibility study of a resource recovery facility at the Lorton landfill site. This study formed the basis of the capital request to the Council to construct such a facility. The contract was made by the Metropolitan Washington Waste Management Agency.

We have reviewed the Waste Management Agency's contract files and spoken to several of the people involved in the contract. The following is a chronology of the actions leading to the agreement with the National Center for Resource Recovery to perform the feasibility study.

In late 1972, it was agreed by the District of Columbia and several Virginia jurisdictions who were jointly using a sanitary landfill site at the Lorton Correctional Complex to expand that landfill site and to begin a program leading to development of a resource recovery facility at the site so as to maximize the landfill use. A Memorandum of Understanding was executed at that time setting forth the terms of use of the landfill and establishing the "I-95 Resource Recovery and Recreational Policy Committee" to, among other things,

"make recommendations relative to resource recovery approaches and technology." The Committee is composed of a representative of the District of Columbia, the Waste Management Agency and Fairfax County.

At its meeting of August 7, 1973, the I-95 Policy Committee decided that a market study to determine the sales value of certain potentially recoverable materials was necessary. The staff of the Waste Management Agency was directed to enter into negotiations for such a market study.

Discussions were held with 6 concerns*:

MITRE Corporation
Public Technology, Incorporated
Ralph Parsons Engineers
General Electric Corporation
Midwest Research Institute
National Center for Resource Recovery, Inc.

The Waste Management Agency staff recommended selection of NCRR based on their experience, proposed work plan, cost and speed of response. The selection was approved at a meeting of the Policy Committee on November 27, 1973, at which time Mr. McKinney represented the District and voted for approval. The contract was formally signed by the Waste Management Agency on March 18, 1972.

The contract was limited in scope, providing only for a market study. For this reason the potential for conflicts of interest was minimal. The contract did, however, contain a conflict of interest clause which reads as follows:

> 107. Interest of Center
>
> The Center covenants that it has presently no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Contract. The Center further covenants that in the performance of this Contract, no person having such interest shall be employed.

---

*The report in the Washington Star-News that 52 concerns were contacted is incorrect. That figure probably refers to the number of firms solicited in an earlier DES solicitation for an unrelated project.

At the Policy Committee meeting, March 24, 1974, it was further determined that a feasibility study should also be conducted of the potential for actual recovery of resources. At this time, it was determined not to seek other concerns to perform the study, but rather to merely amend the original NCRR market study contract. Mr. McKinney also participated in this decision. Thus, there was no competition for the feasibility study work which formed the basis of the Capital request to the Council for the Resource Recovery facility.

Principles of Federal and District of Columbia government contract law are not directly applicable to Waste Management Agency contracts. Were this a government contract, an amendment which makes a change in the basic nature of a contract, referred to as a cardinal change, is not considered proper. Government contract law therefore would have required that a new contract for the feasibility study be made and, if more than one source was available, that more than one proposal be solicited for the new contract.

The feasibility amendment to the original contract did not alter the conflict of interest section. The broadened scope of the work provided in the amendment, however, raises a question as to whether NCRR could continue to comply with its covenant due to its relationship with the beverage industry which may have an interest in proving the feasibility of recovery of beverage container materials.

Financing of the market study and the feasibility study were accomplished as part of current landfill operating expenses. By letter to Walter A. Scheiber, Executive Director of the Waste Management Agency, Mr. McKinney confirmed the agreement reached at the November 27, 1973, Policy Committee meeting that the marketing study would be funded "as a portion of the I-95 Center's operating costs pursuant to Point of Agreement No. 11 in the Memorandum of Understanding." Although I located no document, this agreement appears to have been continued for the feasibility study. The District of Columbia, as operator of the landfill, was billed by the Waste Management Agency for the costs incurred in the studies.

By including the cost as a landfill operating expense, the total cost of the studies were shared between the users of the landfill in proportion to their tonnage allotment. This results in the District assuming approximately 50% of the total cost. Although the landfill operations are

conducted and funded by the District of Columbia, it is not possible from the budget documents to isolate their exact cost. Funding is provided within the DES budget for the Solid Waste Disposal Administration, but there is no separate line item for the landfill. Further, only approximately 50% of the total cost is included in the budget since the city is reimbursed by the other jurisdictions on a quarterly basis for the remaining amount.

Sincerely,

Matthew S. Watson
District of Columbia Auditor

Morton Hit on Arab Boycott Data

By Jack Anderson and Les Whitten

Rangy Rogers C. B. Morton, the personable but stubborn Secretary of Commerce, acted illegally by refusing to give Congress the names of American firms who were urged by the Arabs to boycott Israel.

This is the conclusion reached in a confidential study researched and written by legal experts for the House Oversight and Investigations Subcommittee. Chairman John E. Moss (D-Calif.) has privately circulated the study to subcommittee members in preparation for hearings Monday.

During that showdown testimony, Morton could be cited for contempt of Congress for failing to produce the names. But such drastic action is unlikely, because, among other things, Morton is a former House member.

The confidential memo, however, pulls no punches when it comes to Morton's denial of the data. Citing long-standing precedents, it finds there is absolutely no legal basis for Morton to defy a congressional subpoena of the names of companies asked to discriminate against Jews in return for Arab business.

"Carried to its logical conclusion," the memo states "the secretary's argument would bar Congress from obtaining information in literally dozens of cases where statutes authorize agencies not to publicly disclose but are silent as to Congress."

Moss has subpoenaed the information so the subcommittee can determine the impact of the boycott on American business.

The Commerce Secretary claims the U.S. firms submitted the reports with assurances of confidentiality, and that he must honor that agreement.

Morton is already in a donnybrook with B'nai B'rith's Anti-Defamation League over the boycott. The ADL charges that the Commerce Department is handing out Arab bid invitations containing provisions restrictive to U.S. businessmen.

Our associate Jack Cloherty has obtained copies of these lucrative contract offers. One from Iraq for pre-cast housing units, for example, forbids the American contractor to use "any material that has been manufactured in Israel..."

The built-in ban also applies to "companies boycotted by [the] Iraq government," thus giving the boycott a "secondary" effect. For such firms may be boycotted simply because they have Jews as employees, officials or directors, even though they do no business with Israel.

Footnote: President Ford has declared that "such discrimination is totally contrary to the American tradition." So far, his administration has failed to fit its actions to his words. Now, there are strong rumors that once the Middle East peace is more secure, Mr. Ford will ask for laws making it illegal for U.S. firms to support the boycott.

Litter Suppression—The Environmental Protection Agency has suppressed a memo which accuses one of Richard M. Nixon's staunchest friends, Pepsi-Cola king Donald Kendall, of sabotaging the anti-litter campaign.

The explosive memo, which top officials tried to confiscate and destroy, denounces EPA's cozy relationship with Kendall. "It's like the mayor taking a whore to church," the memo charges.

This ribald characterization was used to describe EPA's dealings with Kendall on trash disposal.

To curb roadside litter, the EPA is seeking laws to force cash deposits on the 60 billion cans and bottles that are thrown away each year. This is opposed by the beverage industry, which has a huge financial stake in disposable cans and bottles. The industry, therefore, has tried to find alternate solutions for the litter problem.

The effort is headed by Kendall. He would like to find ways, of course, that couldn't penalize Pepsi for producing throwaway containers.

Lately, the EPA has been granting contracts to Kendall's National Center for Resource Recovery for several garbage-recovery projects. But the EPA and NCRR don't see alike on the question of throwaways.

For one thing, the NCRR allegedly slipped penalty clauses into contracts with cities, intended to discourage the cities from passing laws that curtail throwaways.

This outraged EPA official David Sussman, who wrote a blistering internal memo calling the arrangement "an obvious conflict of interest." In language seldom seen in bureaucratic communications, he complained:

"I do not think we can afford to become bed partners with [NCRR]. By our funding NCRR ... we have tacitly approved the entire operation.

"It's like the mayor taking a whore to church. She's with him. So she must be OK. NCRR's with EPA. So they must be OK."

Sussman, noting that Kendall "was a very large fund-raiser for the Nixon campaign," complained about NCRR's aggressiveness and arrogance. The group held itself out, wrote Sussman, as the only solution to garbage recovery.

"They may exert more pressure than we do. They spend millions to push their special interests. We are limited to nickels and dimes and must work through channels. I believe they would like to see EPA go away."

The memo did not please EPA brass, who ordered every copy confiscated and destroyed. A bootleg copy, nevertheless, was saved for us.

Division head Nicholas Humber admitted to us that he had issued the order to round up the copies. "The memo did not reflect policy," he explained.

Footnote: A spokesman for Kendall denied that he had used the NCRR to push his fight against throwaway bans. "His policy," said the spokesman, "has been to stay away from any self-serving motive." Nor had Kendall ever used his entree to the White House to further Pepsi's interests, said the spokesman. He insisted: "Don Kendall has no ulterior motive."

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The Washington Star
Metro
• Obituaries
• Weather
SECTION B
MONDAY,
SEPTEMBER 15, 1975

STAR 9-15-75

They'll Need To Recycle Some Cash

By Michael Kiernan
Washington Star Staff Writer

The D.C City Council may have underestimated the cost of building a major regional trash recycling facility by as much as 50 percent, the Environmental Protection Agency has warned.

Rather than $9.6 million, the price tag for the proposed recycling center at the District's Lorton prison complex in Fairfax may well exceed $14 million, according to an EPA review.

The project — which the council approved with reservations last spring — is part of the city's 1975-76 capital improvements program now pending before Congress.

HOWEVER, in approving construction funds last spring, the council agreed to await a final cost analysis by the city's Department of Environmental Services before giving the project its final official blessing.

In a 20-page review undertaken at the request of City Councilman Julius Hobson Sr., EPA criticized cost estimates prepared in January by the National Center for Resource Recovery (NCRR), a non-profit group under contract to study the regional recycling plant which would serve the suburbs as well as the District.

The EPA review — delivered to the council in June — was made available to The Star last weekend.

"Capital costs could be as much as 50 percent higher than the estimates presented in the (NCCR) study," wrote Arsen J. Darnay, former deputy assistant administrator for solid waste management programs at EPA.

"THE COST estimates are based on a preliminary (analysis) that still has many unresolved design questions," Darnay wrote. Darnay said he found major omissions in equipment and support costs.

Items not included in the cost figures included water treatment facilities, a sprinkler system for fire control and storage areas for fuel converted from combustible trash.

In criticizing the cost figures, Darnay said NCRR's "use of exact dollar figures implies a degree of precision that does not exist in the study."

See RECYCLE, B-4

RECYCLE

Continued From B-1

In January NCRR estimated the recycling facility would cost $8.5 million, but noted that its estimate could be off by about $1 million or as much as 15 percent. Inflation, NCRR added, would also increase construction costs.

IN FIGURING construction costs, city officials used NCRR's estimate, tacking on an estimated $1 million in probable inflation costs. EPA estimates that NCRR computations could be as much as $4 million to $5 million off the mark — even without considering inflation.

In his review of the project, Darnay also raised serious questions about the economic advantages of recovering glass, aluminum and other ferrous metals from city trash.

Investment in a system to recover such materials "would involve considerable risks at this time," said Darney, adding that the technology to recover glass and aluminum has not yet been demonstrated on a large scale.

However, Darnay noted, the NCRR "feasibility study" in January underestimated the potential value in selling fuel derived from organic materials in city trash.

THE TECHNOLOGY for recovering refuse-derived fuel is far more certain than that for recovering glass and aluminum, Darnay said.

"It is essential," wrote Darnay, "that the District's next step (before approving a resource recovery facility) should be to obtain firm commitments" from potential customers of refuse-derived fuel. "This is because the energy product of a resource recovery system must be tailored to the needs of the customer."

The EPA review is the latest development in a continuing controversy about the way the District disposes of its solid waste.

Last spring two City Council members — Hobson and Polly Shackleton — raised questions about whether the proposed facility might undermine efforts to pass a controversial ban on non-returnable bottles and cans in the city.

Last year a bill requiring a minimum 5-cent deposit and refund on all beverage containers became the subject of one of the most intensive lobbying efforts ever witnessed in the District building.

ALTHOUGH THE BILL was vetoed by Mayor Walter E. Washington, a similar bill now before the council appears more likely to have a chance of final passage.

EPA has told the council that construction of the proposed plant and adoption of a beverage container bill are not necessarily incompatible.

Darnay faulted the NCRR study for "overstating" the impact that beverage container legislation would have on the economics of resource recovery.

In the past NCRR has been closely identified with the bottle and can industry. Its current chairman is Donald Kendall, president of the Pepsi-Cola Co.

D.C. Council Sets Meeting On Recycling Plant Costs

By Wilson Morris
Washington Post Staff Writer

The D.C. City Council, warned by the Environmental Protection Agency that a $9.6 million regional solid waste recycling plant could face cost overruns of 50 per cent, has called for a meeting with EPA, city budget officials and planners to review Council cost estimates.

The plant, to be located at the Lorton complex, is a joint venture of the District of Columbia, Alexandria and Arlington and Fairfax counties. It would recycle 650 tons per day.

Money for the plant is in the D.C. budget now before Congress and is contingent on a final Council vote by Oct. 6. If the Council approves the plan, the plant could be operating by early 1979.

The plant would be designed to separate paper, ferrous metals, aluminum and glass from the waste and turn most of the remainder into "refuse derived fuel" suitable for sale to power plants. The technology needed to separate the glass and aluminum is still untested and highly experimental.

The EPA report, drafted at the request of Councilman Julius W. Hobson Sr. (S-at-large) by Arsen J. Darnay, former deputy assistant administrator for solid waste management programs, said "capital costs could be as much as 50 per cent higher than the estimates."

According to Darnay the studies prepared for the city by the National Center for Resource Recovery omit major equipment and support costs and leave serious unresolved design questions.

Officials of NCRR, a nonprofit group specializing in resource recovery, contended yesterday that the EPA report failed to take into account NCRR's full analysis, especially its experience with design and construction of a similar plant in New Orleans.

NCRR technical assistance engineer Harvey Gershman said he is confident the plant can be designed and built with the $9.6 million allocated by the city. EPA officials, too, said yesterday that they were in favor of building the plant and believed it could operate successfully despite questions raised in their own report.

After a meeting yesterday with representatives from NCRR and EPA, along with other agencies and opponents of the proposal, D.C. Council member Jerry Moore (R-at-large), chairman of the environmental affairs committee, said a meeting would be held in the next two weeks to resolve the cost estimate question. The committee must make a recommendation to the full Council before Oct. 6.

Opponents attacked the plant plan at yesterday's meeting on grounds that much of the technology is untested. They said the plans should be held until other cities have proved the operational feasibility of such a plant.

A side issue in the proposal is the contention that such a plant would make unnecessary a ban against nonreturnable bottles and cans. But, EPA, NCRR and D.C. officials agreed yesterday that such a ban would have slight impact on the economic feasibility of the plant and that a recycling plant and such a ban were not incompatible.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 13 1975

Mr. Julius W. Hobson
Councilmember
Council of the District of Columbia
Washington, D.C. 20004

Dear Mr. Hobson:

Administrator Train asked me to reply to your letter of April 28 requesting technical assistance, including the review of the Draft Resource Recovery Engineering and Economic Feasibility Study (hereafter referred to as the Study), which was submitted by the National Center for Resource Recovery, Inc. to the Metropolitan Washington Waste Management Agency in January, 1975. This letter presents our comments on the Study and addresses the other issues raised in your letter.

Before discussing the Study and related issues, I want to commend the District of Columbia and the other jurisdictions cooperating in this project for the prudent approach you are taking toward improved solid waste management. Your effort is distinguished by regional cooperation; farsightedness; consideration of all facets of the solid waste management challenge, including waste reduction and source separation; and recognition of the necessity to secure markets as the first step in selecting a resource recovery system.

Our review of the Study is general in nature and is not intended to be an exhaustive engineering and economic analysis. Rather, our comments should serve to identify issues not addressed by the Study or issues requiring further analysis.

Our comments can be summarized as follows:

1. Based on the amount of engineering that was performed in preparing the Feasibility Study, capital costs could be as much as 50 percent higher than the

estimates presented in the Study. (The Study stated that capital costs could be as much as 15 percent higher.)

2. Operating costs could be significantly higher for the same reason.

3. Because materials recovery technology (except for ferrous and paper recovery) has not been demonstrated at commercial scale, the revenue stream from materials recovery is not nearly so certain as the Study implies. Therefore, an investment in a system to recover glass, aluminum, and other non-ferrous metals would involve considerable risk at this time.

4. The technology for recovering refuse-derived fuel (RDF) is far more certain. And although the Study presents revenues from the sale of RDF as zero, a price for the RDF can be determined by bargaining with prospective customers.

5. The analysis in the Study of the impact of beverage container legislation distorts the impact on the economics of resource recovery in three ways: other realistic options were not considered; the Study's estimate appears to be overstated; and losses in revenues resulting from container legislation was compared only to materials revenues but not to total revenues (energy and materials).

6. We recommend that the District move forward in implementing an energy recovery system by contacting prospective customers and developing firm commitments for the purchase of RDF.

The first section, Background, will summarize the scope and findings of the Study itself. Then we will review the Study, examining the following areas:

Scope and Approach
Technology
Capital Costs
Operating Costs
Materials Markets
Energy Markets
Beverage Container Legislation

We shall conclude by addressing the other issues raised in your letter.

BACKGROUND

To put our comments in perspective, it is helpful to review the scope and findings of the Study itself.

Following are the basic parameters of the system under study:

- **Plant Size:**
  - Recommended System
    - Design Capacity: 750 tons per day
    - Projected Throughput: 650 tons per day
  - Optional System
    - Design Capacity: 1500 tons per day
    - Projected Throughput: 1300 tons per day
- **Plant Utilization Rate:** 85 percent (650 ÷ 750 tons per day)
- **Input:** Residential and commercial wastes
- **Outputs (percent by weight)**

(a) Products:	Refuse derived fuel (RDF)	61.4
	Light ferrous metals	8.8
	Heavy ferrous metals	.9
	Flint (clear) glass cullet	2.5
	Color-mixed glass cullet	3.9
	Color-mixed glass fines	.2
	Aluminum	.5
	Other non-ferrous metals	.4
	Corrugated paper	3.2
	Newsprint paper	3.2
		85.0
(b) Residue requiring land disposal		15.0
		100.0

The initial investment (capital cost) and the annual operating costs, revenues, and credits of a 650 TPD facility presented in the Study are summarized on Table I. (The Study also presents the economics of a 1300 TPD facility.)

TABLE I

SUMMARY OF CAPITAL COST AND OPERATING COSTS AND REVENUES

FOR A 650 TPD FULL SCOPE FACILITY

Capital cost: (a)	$7,272,108	to	$8,481,794
Operating costs: (a)	$3,136,047	to	$3,561,180
Operating costs, per ton: (b)	$15.46	to	$17.56
Credit sources, per ton:			
RDF	$ 0		
Materials (see Table II)	9.39		
Landfill (c)	3.36		
	$12.75		
Net operating cost, per ton:	$2.71	to	$4.81
RDF Indifference Value, per million Btu's:	$0.44	to	$0.79

NOTES:

(a) Based on Maximum Daily Tonnage (750 tons per day for 312 operating days). Ranges in capital and operating costs reflect six alternative product transportation modes.

(b) Based on Average Daily Tonnage (650 tons per day for 312 operating days).

(c) Based on $3.79 per ton not landfilled, Average Daily Tonnage; 88.6 percent of input.

(d) Based on RDF output of 51 percent by weight; 6,000 Btu/lb.

The variation in capital and operating costs reflects six different alternatives for transporting the RDF and materials to market.

The Study points out that the capital cost is stated in August, 1974 dollars and should not be used for budgetary purposes without time-phasing. The Study also points out that the analysis is only an initial feasibility study with accuracies of plus or minus 15 percent.

Revenues from the expected sale of materials were estimated based upon advance letters of intent and upon assumptions regarding the composition of the waste stream and the recovery efficiency of each subsystem. (The recovery efficiency is the amount of a material recovered expressed as a percentage of the total amount of that material in the input solid waste.) The advance letters of intent were obtained for all products except waste corrugated, waste newspaper, and glass fines; market values for these three were assumed. Market values for the other products (except RDF) were calculated as of December 2, 1974 according to terms expressed in the letters of intent. Some of the letters also guaranteed floor prices. A summary of the expected revenue stream is presented in Table II. The Study concludes that "revenues from materials recovery... are significant in the overall economics of the various facility considerations."

The Study states that the "full-scope facility involves considerable technological risk in the recovery of aluminum and glass. However, much of this uncertainty may be resolved before the final decision concerning procurement are (sic) made. But even with this uncertainty, investment in glass and aluminum recovery for a portion of the waste may still be in the interest of the I-95 Center."

The Study states that "no technically correct method for RDF price determination exists"; therefore, "the exchange price will be the result of a bargain struck between the I-95 Center and potential users." In lieu of a market quote for RDF, the Study introduces the term "Indifference Value," representing the "minimum value which allows resource recovery to be competitive with landfill at the Lorton site." The Study concludes that "the ultimate question of economic feasibility is a matter of future consideration, since feasibility depends directly on the exchange price negotiated for RDF."

TABLE II

REVENUES FROM FULL SCOPE MATERIALS RECOVERY FACILITY (a)

Material	Recovery Efficiency (%) (b)	December 2 Revenues/input ton	Floor Revenues/input ton
Light Ferrous	95	$4.32	$1.57
Heavy Ferrous		.55	--
Aluminum	70	1.47	1.23
Other Non-ferrous	87	.91	--
Flint Glass	99	.40	.40
Color-mixed Glass		.57	.57
Glass Fines		.21	.21 (c)
Waste Corrugated	NA	.64	.64 (c)
Waste News	NA	.32	.32 (c)
TOTAL		$9.39	$4.94

NOTES:

(a) These are gross revenues, not including transportation, which is included as a cost in the overall economic analysis. Revenues are expressed in dollars per ton of input solid waste.

(b) Recovery efficiencies calculated by EPA from Drawing #40032 in Appendix A of the Study. NA indicates that data was not available to make these calculations.

(c) Floor prices for glass fines, waste corrugated, and waste news are estimated and are not covered by advance letters of intent.

The Study analyzed the impact of beverage container legislation on the economics of the subject facility, concluding "that a significantly higher RDF exchange value will be required in order to be competitive with alternative landfill disposal costs."

The Study recommends a study of a de-centralized network of processing facilities as an alternative to one centralized facility. Pending the outcome of this network study, the Study made its ultimate recommendation: the 650 ton per day facility is recommended for implementation at this time.

REVIEW OF THE STUDY

Scope and Approach. The Study discusses the economic feasibility of a system to recover materials from the waste stream. In addition, the Study also presents a conceptual design of a refuse derived fuel (RDF) system. However, we understand that the Study was intended to estimate the cost of a system designed to recover materials that could be marketed, but it was not intended to evaluate the technical feasibility of the system. In our opinion, based on the level of engineering incorporated in the Study, the confidence in the cost estimates expressed in the Study is too high. These points are discussed in the technology section.

The approach of the Study is to address the question of "what is the best materials recovery system and what can be done to use the residual as energy?" Most resource recovery feasibility studies approach the subject from a different perspective. Because approximately 65 to 75 percent of the waste stream can be recovered through energy recovery techniques and only 15 to 20 percent by materials recovery techniques, most studies examine energy recovery approaches first. Approaches for materials recovery from the energy recovery system residual usually are examined in secondary priority.

Your Study reversed these priorities, with materials recovery as a first priority and energy recovery second, apparently because an assumption was made that revenues from materials are more certain than revenues from energy. We disagree with this assumption. We do not think the certainty of the materials revenue is greater than the certainty of

the energy revenue. In addition, the energy revenue is usually much greater than the material revenue. (Our reasoning is explained in the discussion of markets.)

One consequence of this reversal in priorities is that other energy recovery technologies were not examined in the Study. This is to be expected, because the energy residual from this materials recovery system is probably employed best as RDF. Any other energy recovery approach, if integrated with a full-scope materials recovery system, would probably require a significantly greater capital investment. However, without having considered other energy recovery technologies, it is not possible to judge whether the approach taken in the Study is the best for the District.

Technology. The Study points out that there is "a certain degree of doubt in the ability of the proposed recovery processing technology to recover glass cullet and aluminum to the target specifications" without exceeding projected capital and operating costs. It is important that this be given proper emphasis in your decision-making process, especially if a significant portion of expected revenues are attributable to these products. These processes hold promise, but they have not been demonstrated at commercial scale.

As you read in the Background section, this plant is designed to recover 10 different products. Most constructed or planned resource recovery plants recover two to five products. As a first step, many recover energy and ferrous because there is some actual experience with energy and ferrous recovery. Some communities plan to add recovery of glass, aluminum, or paper. There is virtually no experience in recovering the latter products.

A system similar to the one described in the Study will be built in New Orleans with primarily private funds. When it is operational, we will evaluate its feasibility so that we can provide this information to cities. To our knowledge, no other comprehensive materials recovery systems are planned. None has operated to date.

This is not to say that including these processes in your system would be imprudent; indeed, progress is made by taking risks. However, this risk should be recognized by the District in determining which risks the District is willing to accept.

The system is not designed for a high level of reliability. In the subject system, there is little of the redundancy required for the high reliability needed for high utilization. Yet, the plant utilization rate (85 percent) used in the economic calculations is as high as some systems designed with greater redundancy. This design orientation appears to be a conscious decision because a landfill is available when the system cannot operate. Nonetheless, this design philosophy should be recognized by everyone. Because this system can be expected to be in operation less frequently than systems designed with greater redundancy, resource recovery will be decreased and landfill life will be decreased. Supposedly, capital cost and net operating costs will be lower in a system with less redundancy; however, we cannot make a judgment on this assertion because evaluation of other system options were not included in the Study.

Capital Cost Estimates. In reviewing the estimate of capital cost of the system, it should be kept in mind that this estimate is preliminary and should not be considered representative of the final plant cost. The use of exact dollar figures implies a degree of precision that does not exist in this Study.

The cost estimate is based on a preliminary flow diagram that still has many unresolved design questions. Only major equipment items have been identified at this point; and, as a more detailed design emerges, additional equipment requirements will be identified. For example, some of the items that have not yet been included are wastewater treatment facilities, bag houses to control dust from the cyclones, instrumentation and the control panel, a sprinkler system for fire control, and RDF storage either at the processing plant or the power plant. In addition, as design proceeds, it will become necessary to incorporate a certain level of reliability into the system. Factors that increase reliability, and also the cost of the plant, include intermediate surge storage capabilities, redundancy of key process lines, excess instrumentation to automate operations or protect equipment from misuse, installation of monorail and bridge cranes to enable easy access for maintenance, and a spare-parts inventory.

With so many cost factors still to be defined, it is our opinion that it is premature to suggest a confidence level of 85 percent for the capital cost as recommended in the Study. In fact, a confidence factor of only 90 percent

would still be applicable even after detailed plans and specifications have been completed. Based on the equipment items identified by the Study and the detailed costs that have been developed for similar systems or subsystems, it is our opinion that the "installed cost" of the mechanical hardware for this design may be expected to increase by as much as 50 percent. In addition, as the Study has pointed out, capital costs must also be escalated from August, 1974 to allow for inflation.

Operating Cost Estimates. Operating costs are also very difficult to project with a high level of confidence because the final design has not been completed and there is little operating experience elsewhere to draw from. As in the case of capital costs, the use of exact dollar figures implies a degree of precision that does not exist in this Study.

In addition, some points may not have been considered fully. For example, the plant operating schedule calls for two eight-hour shifts, each working six days per week. Do the projected labor costs allow for eight hours of overtime per man per week? If not, this would add about 30 percent to the projected labor costs.

The newspaper and corrugated separation operation warrants further analysis of operating costs. This is particularly true because an option exists for either recovering this material for recycling or as part of the RDF. It is our opinion that, in order to maintain an average yield of four tons per hour of paper and corrugated, at least four handpickers must be on the belt at all times. In addition, these extra men appear necessary because they will have to locate and remove items unsuitable for the shredder and because peak wastepaper throughput will exceed average recovery rates when commercial loads flow through the system. In addition to these men, at least two additional men will be needed per shift to operate the baler and to transfer the bales to the product storage area.

Another area that was not clear in the Study was the cost associated with maintaining a back-up landfill to receive plant residues and to receive the solid waste whenever the processing plant is out of operation. The source of the $3.79 figure as the cost per ton of landfilling was not documented in the Study.

Format is very important in communicating information. In the Study, a credit for landfill costs saved is deducted from operating costs to arrive at "net costs." In our opinion, this is not a fair presentation because it understates the total net cost of the facility under study and hinders a fair comparison among waste management alternatives.

Materials Markets. The emphasis that the Study places on securing markets, as evidenced by letter of intent, is commendable. However, the revenue stream from materials recovery is not nearly so certain as the Study implies.

The certainty of the revenue stream is a function of (1) the certainty that the technology can produce a marketable (quality) product, (2) the certainty that the projected quantities can be recovered, and (3) the certainty of the markets. This relationship can also be expressed as:

Revenues = Quality x Quantity x Price

The Study points out that there is "a certain degree of doubt in the ability of the proposed recovery processing technology to recover glass cullet and aluminum to the target specifications" without exceeding projected capital and operating costs. Expressed another way, there is considerable uncertainty that the technology can produce a marketable product. The reason for this uncertainty is that the technology to recover glass and aluminum has not yet been demonstrated at commercial scale. Although glass and aluminum recovery has been considered by many communities, your attention is called to the fact that, of all the systems being designed, constructed, or operated today, the only ones that recover glass, aluminum, and other non-ferrous metals are demonstration projects supported by EPA (Franklin and San Diego County) or by NCRR (New Orleans). Only one locally-funded system, in Ames, Iowa, includes aluminum recovery; and Ames has not yet secured a market for the aluminum. Therefore, an investment in technology for the recovery of glass, aluminum, and other non-ferrous metals would involve considerable risk at this time. This risk may be greater than the District is willing to accept.

Closely related to product quality is the quantity of material that can be recovered. Quantity is a function of (1) the composition of the waste stream (i.e., how much aluminum is in the waste?), and (2) the recovery efficiency of the system (i.e., how much of that aluminum can be recovered?). No investment in resource recovery systems

should be made without first analyzing the composition of the waste stream in this area. To fail to do this could result in attempting to recover a quantity of a material that is not there. Furthermore, the composition of the waste stream is liable to change over time, thus increasing the riskiness of materials recovery. Beverage container legislation can change the waste stream composition, as can free market forces. For example, the use of plastic soft drink bottles was approved recently by the Food and Drug Administration; with this development, plastic could replace significant percentages of the glass and aluminum in the waste stream by as early as 1980.

The other factor affecting quantity, the recovery efficiencies for the glass, aluminum, and other non-ferrous metals subsystems in the Study (see Table II), appears optimistic, especially considering that the technology has not been demonstrated.

Finally, the economic analysis presented in the Study is based on market prices for the several materials as of December 2, 1974. Market prices for such materials can be expected to fluctuate over time; therefore, the revenues to the system could be considerably less than those presented in the analysis. In fact, revenues based on guaranteed floor prices (guaranteed only if the product meets specifications) are only 53 percent of the revenues presented in the economic analysis in the Study.

In summary, the projected revenue stream of $9.39 per input ton is only as certain as the technology, the composition of the waste stream, and the market prices. Inasmuch as there is considerable uncertainty in all of these, an investment in a system to recover glass, aluminum, and other non-ferrous metals would involve considerable risk at this time, especially if the economic success of the system depends heavily on the revenues from those products.

Energy Markets. The certainty of the revenues from the sale of RDF should be analyzed in the same way. The certainty of RDF revenues is a function of (1) the certainty that the technology can produce a marketable product, (2) the composition of the waste stream and the recovery efficiency, and (3) the market price.

In contrast to materials recovery where the technology is uncertain, the technology for producing RDF and firing it

with coal has been demonstrated at St. Louis. The level of risk in that system is apparently acceptable to five communities, because that many communities are now designing or constructing similar systems. The firing of RDF in combination with oil has not been demonstrated, although one community (Bridgeport, Connecticut) is now designing such a system. Several other oil-firing systems are being contemplated, including one by the District of Columbia's Department of Environmental Services.

The Study presents the revenues from the sale of RDF as zero; the justification for this is that "no technically correct method for RDF price determination exists." This is not true; a price for the RDF can be determined by bargaining with prospective customers until an agreement is reached. This price would be based upon the value of fossil fuel minus the incremental costs of firing RDF. In addition, this resulting value may have to be discounted further as an incentive for the customer to use the RDF.

The price for RDF in the Washington area should be determined on the basis of what potential RDF customers pay for fossil fuel. PEPCO, for example, generates 60 percent of its electricity from coal and 40 percent from oil. PEPCO's average system-wide fuel costs in March, 1975 were:

Coal	$1.53 per million Btu's
Oil	1.74 per million Btu's

To illustrate how the value of RDF could be determined, assume that the customer pays $1.50 per million Btu's for coal. The system described in the Study recovers about 65 percent of the input waste as RDF; this RDF is prepared almost exactly as it is prepared in St. Louis, where the heating value averages 5,000 Btu's per pound, or 10 million Btu's per ton. Thus, every input ton of waste yields 6.5 million Btu's (65 percent of 10 million) with a gross value of $9.75 (6.5 times $1.50). If the customer's incremental firing costs were about $3 (a reasonable cost, based on the St. Louis experience), and if a 10 percent discount were taken, the revenue to the recovery facility would be just under $6 per input ton. The price of RDF based on the value of fuel oil costing $1.75 per million Btu's would be over $7 per ton.

As mentioned earlier, format is important in communicating information. This applies to the way in which the value of RDF is expressed. The accounting format used in the Study focuses on the Indifference Value, the value that "the

exchange price for RDF must take in order for the net operating cost of a facility to be competitive with alternative landfill operating costs." In our opinion, this method of expressing cost and revenue data could work to the disadvantage of the District of Columbia by reducing the District's bargaining power vis-a-vis a customer like PEPCO. For example, if PEPCO were to pay a price for the fuel in excess of the Indifference Value, it could appear that the resource recovery system would be making a profit at the expense of electric rate payers. But because the credit for landfill saved has been deducted in calculating the Indifference Value, the apparent profit would not be a profit at all. But under these circumstances, it would be very difficult for PEPCO to justify this price to their management, to their stockholders, or to the Public Service Commission.

The composition of the waste stream is subject to fluctuations; but such fluctuations are not likely to be as severe as in the case of materials recovery. This is because the combustible fraction of the waste stream is less susceptible to changes (legislated and otherwise) over time.

The market price for the RDF, based on the value of fossil fuel, is not likely to decline. However, the advent of nuclear power may reduce the availability of fossil-fuel power plants. This could have one of two effects: either the cost of firing would increase because oversized equipment would be necessary to fire a fixed amount of waste during fewer operating hours; or the market for the RDF could be eliminated altogether during the later years of the project. Although the latter case is not likely, it must be considered in evaluating the certainty of the market for RDF.

In summary, in our opinion an effort should be made to negotiate a price for the RDF. Once this price is established, given that the level of risk in the technology to produce RDF is likely to be acceptable to the District, the certainty of the revenues from RDF appears to be high, especially in contrast to revenues from sale of the three materials discussed above.

Analysis of Impact of Beverage Container Legislation. We feel that the Study distorts the impact of beverage container legislation in three ways:

1. Other realistic options were not examined. The Study examined the impact of beverage container legislation on the specific system already selected. Another, similarly realistic option, would be to design a materials recovery system with the assumption of beverage container legislation already enacted. In the latter case, it is possible that the glass and aluminum recovery element would not be included in the facility, thus reducing capital costs.

It is possible that mandatory deposits on beverage containers would be the best method for maximizing glass recovery. First, deposit legislation would apply immediately to the entire city. Beverage container legislation could be expected to reduce by 45 percent the glass in the waste stream requiring disposal. The materials recovery system in the Study is projected to recover 99 percent of the glass from only one fourth of the area's waste, or a 25 percent reduction of glass in the waste stream requiring disposal. Second, the value of the glass recovered by a deposit system is greater than the value recovered by materials recovery. Homogeneous glass refillable bottles are obviously worth many times the value of crushed glass bottles.

2. Estimate of the dollar impact of beverage container legislation was overstated by a factor of two. The Study estimates that, if a mandatory beverage container deposit law were enacted, revenues from sale of materials would decline by 27 percent assuming December 2, 1974 prices (37 percent assuming floor prices). (See Table III, part A.) The Study did not provide enough information to verify these estimates. However, using national averages for the waste stream composition and the packaging mix, we estimate that the decline in revenues from sale of materials would be half as great: 14 percent assuming December 2, 1974 prices (19 percent assuming floor prices). In addition, the effect on net cost may be less than either the Study's estimate or our estimate because (a) operating costs may be reduced by eliminating some processing components and (b) revenues from the sale of RDF would not be reduced.

Although this comparison is not conclusive, it indicates that an accurate estimate of the impact of beverage container legislation can be made only with precise data on the waste stream composition and packaging mix in the Washington area.

TABLE III

ANALYSIS OF IMPACT OF BEVERAGE CONTAINER LEGISLATION

ON ECONOMICS OF 650 TPD SYSTEM

A. Impact on Revenues from Materials Recovery Only

	Per Study				Per EPA			
	No BCL[1]	BCL[2]	Diff	%	No BCL[1]	BCL[3]	Diff	%
12/2/74 Revenues	$9.39	$6.81	$2.58	27	$9.39	$8.09	$1.30	14
Floor Revenues	4.94	3.10	1.84	37	4.94	4.00	.94	19

B. Impact on Revenues from Materials and RDF Recovery[4]

	Per Study				Per EPA			
	No BCL[1]	BCL[2]	Diff	%	No BCL[1]	BCL[2]	Diff	%
12/2/74 Revenues	$15.39	$12.81	$2.58	17	$15.39	$14.09	$1.30	8
Floor Revenues	10.94	9.10	1.84	17	10.94	10.00	.94	9

NOTES:

1. No BCL: gross revenues assuming beverage container legislation (BCL) not passed.

2. BCL: gross revenues assuming passage of BCL; waste composition and packaging mix were not specified in the Study.

3. BCL: gross revenues per study assuming passage of BCL; assumes use of natural averages for waste composition and packaging mix.

4. RDF revenues: $6 per ton of input waste, assuming value of coal at $1.50 per million Btu's, 5,000 Btu's per pound, 65 percent of input waste burned as fuel, customer's fuel firing costs at $3 per ton of RDF, and customer discount at 10 percent of gross value of RDF.

3. Loss in revenues resulting from container legislation was compared only to materials revenues but not to total revenues (energy and materials). The Study did not include energy recovery revenues because these were assumed to be less certain than materials. However, in our opinion discussed above, revenues from RDF appear more certain than revenues from materials recovery and, therefore, should be included in this analysis.

The Study's analysis, because it is based only on revenues from materials recovery, overstates the impact of beverage container legislation on the system's economics. Table III indicates the magnitude of this overstatement. For example, when RDF revenues are included in the Study's estimate, the impact (decline in total revenues) is only 17 percent, compared to 27 percent (37 percent for floor revenues) of revenues from materials only. Similarly, when RDF revenues are included in EPA's estimate, the impact (decline in total revenues) is only 8 percent (9 percent for floor revenues), compared to 14 percent (19 percent for floor revenues) of revenues from materials only. This analysis shows that the exclusion of revenues from RDF overstates the impact of beverage container legislation by a factor of two.

Summary. EPA is particularly concerned with several aspects of the Study, including:

1. The relatively high level of confidence in the capital and operating costs, given the level of engineering performed to date.

2. The degree of certainty in the ability to generate the expected revenues without exceeding the projected costs.

3. The impression of precision and certainty created by the use of exact dollar figures.

4. The impression of net cost created by taking a credit for waste not landfilled.

5. The impact of the use of the Indifference Value on negotiations with potential fuel users.

6. The assumptions used in the analysis of the impact of beverage container legislation.

OTHER ISSUES

Emphasis on Energy Recovery. You asked whether the District of Columbia should place more emphasis on energy recovery in view of the critical shortages in this area. Undoubtedly you are aware that energy can be conserved through waste reduction and materials recycling as well as through using solid waste as a fuel.

Therefore, we recommend that all approaches be considered by cities in making decisions on their solid waste management systems. Of course, certain trade-offs exist, as in the recovery of paper for recycling or for use as a fuel. The energy conservation and environmental benefits of this trade-off have not been fully documented, but in general EPA favors recovery of paper as a fiber. As a practical matter, we recommend that local economic conditions determine the ultimate use of the wastepaper. A city utilizing RDF has the option of burning recovered paper during periods of low paper prices, and of recovering for sale as a fiber during periods of high paper prices.

Decentralized System. You asked whether a decentralized system would be more cost-effective than a centralized one. We believe this question cannot be answered without a comprehensive analysis of local transportation costs and population concentration. Both approaches have merit depending on the local situation.

RECOMMENDATIONS

By its nature, a critical review usually concentrates on areas of disagreement rather than agreement. We have identified several areas where we differ from the methodological approaches and assumptions used in the Study. Certainly, we do want to make it clear that we continue to urge the District to continue on its path of implementing resource recovery. However, we also urge the Council and the Department of Environmental Services to analyze and discuss the issues we have identified.

As you know, Mr. William McKinney, Director of the Department of Environmental Services, requested our review of the Study two or three months ago. At that time, we reviewed the economics of the Study. Because we did not have the resources at that time to give the Study a thorough

analysis, we were able to review the economic analysis only based on the assumptions and methodology of the Study. As we reported to Mr. McKinney at that time, we found little fault with the Study. In this letter, we have tried to provide a more comprehensive analysis, examining the assumptions and methodology that we did not challenge in our first review. This has taken us a lot more time that we anticipated, but we think that it was necessary. Our conclusions follow.

In our opinion, full-scope materials recovery without energy recovery is too risky at this time. We understand from the NCRR project staff that they were directed by the I-95 Policy Committee to employ the unusual approach of examining the feasibility of building a system first to recover materials (about 20 percent of the waste stream) and secondly to recover energy (65 to 80 percent of the waste stream) if a market exists. We think the priorities should be reversed. The District should concentrate its efforts on implementing an energy and ferrous recovery system with the capability of adding additional materials recovery systems as the technology is demonstrated.

It is essential, though, that the District's next step should be to obtain firm commitments from potential energy customers. This is because the energy product of a resource recovery system must be tailored to the needs of the customer.

If a customer is willing to make a firm commitment to purchase RDF, an RDF system appears to be feasible in the Washington area. There are coal-burning boilers in this area; and, as mentioned earlier, the use of RDF in combination with coal has been demonstrated at St. Louis. In addition, five similar systems are now being designed or constructed. There are also oil-burning boilers in this area; however, RDF has not been demonstrated in an oil-fired boiler. For this reason, a prospective purchaser may want additional data. If these data are required, they may be obtained from the proposed project to be conducted jointly by the District, PEPCO, and EPA at the District's Solid Waste Reduction Center Number One and PEPCO's Benning Power Station.

If a customer for RDF cannot be found, then the District will have to consider other energy markets such as steam, electricity, or gas. If so, then a different technology will have to be considered. In addition to the technology, the location of the waste processing plant will be dependent in large part on the location of the customer.

In conclusion, we encourage the District to continue to work toward implementing a resource recovery system; however, we cannot emphasize enough the need to obtain a firm purchase commitment from a prospective energy customer before the decision is made to utilize a particular technology or to build the facility at a particular location.

As you proceed in implementing your system, we would be pleased to provide technical assistance to the District of Columbia. I am assigning Nicholas Humber, Director of the Resource Recovery Division, to manage the efforts of this Office in your behalf. Please call Mr. Humber at 254-7840 at your earliest convenience.

Thank you very much for the opportunity to review the Study. Again, I want to commend you for the prudent direction in which you are moving. We look forward to working with you in developing the solid waste management system that best serves the citizens of the Washington area.

Very truly yours,

Arsen J. Darnay
Deputy Assistant Administrator
for Solid Waste Management Programs (AW-562)

cc: Mr. William McKinney
Director, Department of Environmental Affairs

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

27 MAY 1975

OFFICE OF THE ASSISTANT ADMINISTRATOR

Mr. Julius W. Hobson
Councilmember at large
Council of the District of Columbia
Washington, D.C. 20004

Dear Mr. Hobson:

Your letter of May 2, 1975, to Mr. Zarb and the enclosed study entitled "Resource Recovery Engineering and Economic Feasibility Study for Either a 650 to 1300 Ton Per Day Processing Facility at the I-95 Resource Recovery, Land Reclamation, and Recreation Center" has been forwarded to my office for response. I will address your three specific questions first.

> "Is the system presented in the NCRR's feasibility study the most up-to-date in terms of the energy recovery technology now available?"

As you indicate in your letter, there are several different approaches to resource recovery. Because there is little operational experience with any resource recovery system (with the exception of water wall incinerators), there is at present no hard data to say one system is demonstrably superior to any other system for all sets of circumstances. I note that you have sent a letter to the Environmental Protection Agency which is sponsoring and evaluating demonstrations of various approaches to resource recovery. They are in a more knowledgeable position than FEA to respond to this question. It should be noted that the system proposed for the District allows for complete resource recovery, both materials and energy.

RECEIVED

MAY 29 1975

Julius Hobson, Sr.
Councilmember-At-Large

"The resource recovery system presented in the NCRR feasibility study appears to be the type being built for the city of New Orleans which has proven economically incompatible with returnable beverage container legislation. Does the returnable beverage container legislation save energy?"

A great deal of work has been done with respect to estimating the energy impact that beverage container legislation would have. Most of these studies have concluded that elimination of one-way beverage containers would save energy. Critics of these studies maintain that the authors have ignored new container technologies, the impacts which container legislation would have on resource recovery, and the fact that the energy savings were based on unrealistic assumptions about the elimination of cans and the life expectancy of a refillable bottle.

Recognizing the controversial nature of these studies, FEA contracted with Research Triangle Institute for a study to examine the energy and economic impact of bottle legislation. This study, which should be completed in early August, will extend the existing work on this subject including the points mentioned above. We will send you a copy when it is completed.

"What other types of resource recovery facilities presently being marketed are compatible with beverage container legislation and would be more cost effective?"

One specific task of the Research Triangle Institute study is to evaluate the economic impact that bottle legislation will have on resource recovery. It is clear that any legislation that reduces the amount of metals and glasses from the waste stream will have some adverse economic effect on any resource recovery system designed to recover such materials. Whether the effects are significant or not is to be determined.

With respect to your question, "whether the District of Columbia should place more emphasis on energy recovery . . . ," let me say that it is the Federal Energy Administration's policy to encourage as much productive utilization of the energy in the solid waste stream as is economically viable, either through recycling materials or by direct recovery of energy as appropriate. We, therefore, applaude the District of Columbia's efforts in attempting to undertake resource recovery.

Concerning your request for technical assistance, unfortunately FEA does not have the staff to provide direct technical support. However, Mr. Morris Zusman, program manager for solid waste, is knowledgeable in this area and could be helpful in providing advice. You may reach Mr. Zusman in the Office of Energy Conservation and Environment at 961-8067.

Also, with respect to your inquiry about the study that FEA, EPA and TVA are jointly funding, one requirement of the contract is for TVA to put on a seminar presenting the study results to the entire electric utility industry. Personnel from the local utilities will be receiving invitations to the seminar.

Thank you for your interest in energy conservation.

Sincerely,

Dennis W. Bakke
Deputy Assistant Administrator
Energy Conservation and
Environment

Council of the District of Columbia
Memorandum

City Hall, 14th and E Streets, N.W. 20004 Fifth Floor 638-2223 or Government Code 137-3806

To JULIUS HOBSON, COUNCIL MEMBER

From EDWARD B. WEBB, JR., GENERAL COUNSEL

Date AUGUST 14, 1975

Subject YOUR MEMORANDUM TO ME OF JUNE 27, 1975

You have requested my opinion as to when the 90-day period terminates with respect to which the Council directed that the Mayor report to the Council on the results of consultation with various federal agencies concerning new resource recovery systems in conjunction with the $9.6 million allocated for a recovery system at the Lorton site.

Generally the efficacy of the Council's budget provisions in so far as city agencies are concerned become operative from the date of enactment, however any permanent related mandate must be considered in light of the fact that the Congress still retains the budgetary control. Consequently, the 90-day provision must be viewed as interdependent upon final Congressional action. That does not mean the consultation directed by this provision should not have been initiated based on the Council's activity. At any rate the major thrust of this provision is that before any contract is let,the Council has had an opportunity to review this report and act thereon.